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Attorneys for UAE Intervention Group

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of Its Proposed Electric Service Schedules and Electric Service Regulations

Docket No. 09-035-23

PREFILED DIRECT TESTIMONY OF NEAL TOWNSEND [RATE DESIGN]

The UAE Intervention Group (UAE) hereby submits the Prefiled Direct Testimony of Neal Townsend on rate design issues.

DATED this 22nd day of February, 2010.

s		
	Gary A. Dodge,	
	Attorneys for UAE	

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by email

this 22nd day of February, 2010, on the following:

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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

Direct Testimony of Neal Townsend

on behalf of

UAE

[Rate Design]

February 22, 2010

1		DIRECT TESTIMONY OF NEAL TOWNSEND						
2								
3	Intro	<u>oduction</u>						
4	Q.	Please state your name and business address.						
5	A.	My name is Neal Townsend. My business address is 215 South State						
6		Street, Suite 200, Salt Lake City, Utah, 84111.						
7	Q.	By whom are you employed and in what capacity?						
8	A.	I am a Senior Consultant in the firm of Energy Strategies, LLC. Energy						
9		Strategies is a private consulting firm specializing in economic and policy						
10		analysis applicable to energy production, transportation, and consumption.						
11	Q.	On whose behalf are you testifying in this proceeding?						
12	A.	My testimony is being sponsored by the UAE Intervention Group						
13		("UAE").						
14	Q.	Please describe your educational background.						
15	A.	I received an MBA from the University of New Mexico in 1996. I also						
16		earned a B.S. degree in Mechanical Engineering from the University of Texas at						
17		Austin in 1984.						
18	Q.	Please describe your professional experience and background.						
19	A.	I have provided regulatory and technical support on a variety of energy						
20		projects at Energy Strategies since I joined the firm in 2001. Prior to my						
21		employment at Energy Strategies, I was employed by the Utah Division of Public						
22		Utilities as a Rate Analyst from 1998 to 2001. I have also worked in the						
23		aerospace and oil and natural gas industries.						

1	Q.	Have you previously testified before this Commission?
2	A.	Yes, I have testified in several utility regulatory proceedings before the
3		Utah Public Service Commission.
4	Q.	Have you testified before utility regulatory commissions in other states?
5	A.	Yes. I have testified before the Michigan Public Service Commission. A
6		more detailed description of my qualifications is contained in Attachment A,
7		attached to this testimony.
8		
9	Over	view and Conclusions
10	Q.	What is the purpose of your testimony in this phase of the proceeding?
11	A.	My testimony addresses: (1) RMP's proposed rate design for Rate
12		Schedules 8 and 9; and (2) RMP's proposed rate design for Rate Schedule 6.
13	Q.	What conclusions and recommendations do you offer based on your
14		analysis?
15	A.	I offer the following conclusions and recommendations:
16		(1) RMP's proposed rate design for Schedule 8 and 9 is generally
17		reasonable; however, within each respective rate schedule, the time-of-use energy
18		charges for each time period should be increased by the same percentage, rather
19		than increasing the on-peak periods by a lower percentage than the off-peak
20		periods, as would occur under RMP's proposal.
21		(2) RMP's proposed rate design for Schedule 6 reasonably aligns demand-
22		related and energy-related charges with costs. In proportionately scaling these

charges down to reflect the Commission's ordered revenue requirement, this same 1 relationship should be retained. 2 3 Rate Design - Schedules 8 and 9 4 0. Do you have any comments on RMP's proposed rate design for Schedules 8 5 and 9? 6 7 A. Yes. The energy charges for both Schedules 8 and 9 are recovered on a time-of-use ("TOU") basis. In its filed case, RMP's proposed increase to the 8 energy charges for both of these rate schedules retained the same absolute 9 differential between on-peak and off-peak prices as in current rates. 10 Mathematically, this means that on-peak rates would experience a smaller 11 12 percentage increase than off-peak rates, as shown in Table TNT-1, below. 13 Table TNT-1 14 RMP's Proposed Percentage Increase in Schedule 8 & 9 TOU Energy Rates 15 (at RMP's Proposed Revenue Requirement in its Rebuttal Filing) 16 17 18 Current Proposed Percent Schedule 8 19 Rate Rate Change Summer On-Peak (¢/kWh) 3.9189 4.0283 2.79% 20 3.57% Non-Summer On-Peak (¢/kWh) 3.0677 3.1771 21 Summer/Non-Summer Off-Peak (¢/kWh) 2.6426 2.7520 4.14% 22 23 Current Proposed Percent 24 Schedule 9 Rate Rate Change 25 Summer On-Peak (¢/kWh) 3.4643 3.5821 3.40% 26 Non-Summer On-Peak (¢/kWh) 4.52% 2.6049 2.7227 27 Summer/Non-Summer Off-Peak (¢/kWh) 2.1760 2.2938 5.41% 28 29

Q. What is your assessment of RMP's proposal for applying any rate increase to the TOU energy charges for Schedules 8 and 9? A. I disagree with assigning smaller percentage increases to the on-peak

prices relative to the off-peak prices. This sends the wrong price signal by not giving proper weight to the on-peak increase. Instead, I recommend that the same percentage increase be applied to the on-peak and off-peak energy charges. For comparison purposes, this approach is illustrated in Table TNT-2, below, using RMP's proposed energy revenue requirement for Schedules 8 and 9 found in the Company's rebuttal filing. The illustrative charges in Table TNT-2 are derived in UAE Exhibit RD 1.1 (TNT-1).

Table TNT-2

UAE- Proposed Percentage Increase in Schedule 8 & 9 TOU Energy Rates

(at RMP's Proposed Revenue Requirement in its Supplemental Filing)

1		11	٥,
	Current	Proposed	Percent
Schedule 8	Rate	Rate	Change
Summer On-Peak (¢/kWh)	3.9189	4.0657	3.75%
Non-Summer On-Peak (¢/kWh)	3.0677	3.1826	3.75%
Summer/Non-Summer Off-Peak (¢/kWh)	2.6426	2.7415	$3.74\%^{1}$
	Current	Proposed	Percent
Schedule 9	Rate	Rate	Change
Summer On-Peak (¢/kWh)	3.4643	3.6323	4.85%
Non-Summer On-Peak (¢/kWh)	2.6049	2.7312	4.85%
Summer/Non-Summer Off-Peak (¢/kWh)	2.1760	2.2815	4.85%

¹ The slight difference in off-peak percentage increase is caused by rounding to achieve the target schedule revenue.

Q.	The Commission issued its Phase I revenue requirement, cost-of-service, an	ıd							
	rate spread order on February 18, 2010. Have you prepared a recommended								
	rate design for Schedules 8 and 9 at the Commission's ordered revenue								
	spread?								
A.	Yes. My recommended rates are derived in UAE Exhibit RD 1.2 (TNT-	-							
	2). In these proposed rates, I have maintained the customer charge as proposed	by							
	RMP in its rebuttal testimony. The remaining charges are increased by								
	approximately the same percentage to achieve the ordered revenue for each								
	schedule. Table TNT-3 summarizes my recommended time-of-use energy								
	charges.								
	Table TNT-3								
	UAEs Proposed Percentage Increase in Schedule 8 & 9 TOU Energy Rates (at the PSC's Ordered Revenue Requirement)								
	Schedule 8 Rate Rate Chang Summer On-Peak (¢/kWh) 3.9189 4.0021 2.12% Non-Summer On-Peak (¢/kWh) 3.0677 3.1328 2.12% Summer/Non-Summer Off-Peak (¢/kWh) 2.6426 2.6986 2.12%	<u>e</u> 0 0 0 0 0							
	Schedule 9 Rate Rate Chang Summer On-Peak (¢/kWh) 3.4643 3.5854 3.50% Non-Summer On-Peak (¢/kWh) 2.6049 2.6959 3.49% Summer/Non-Summer Off-Peak (¢/kWh) 2.1760 2.2520 3.49%	<u>se</u> 62							
		rate spread order on February 18, 2010. Have you prepared a recommend rate design for Schedules 8 and 9 at the Commission's ordered revenue spread? A. Yes. My recommended rates are derived in UAE Exhibit RD 1.2 (TNT-2). In these proposed rates, I have maintained the customer charge as proposed RMP in its rebuttal testimony. The remaining charges are increased by approximately the same percentage to achieve the ordered revenue for each schedule. Table TNT-3 summarizes my recommended time-of-use energy charges. Table TNT-3 UAEs Proposed Percentage Increase in Schedule 8 & 9 TOU Energy Rates (at the PSC's Ordered Revenue Requirement) Current Proposed Percentage Increase Rate Rate Change Summer On-Peak (¢/kWh) 3,9189 4,0021 2,12% Non-Summer On-Peak (¢/kWh) 3,0677 3,1328 2,12% Summer/Non-Summer Off-Peak (¢/kWh) 2,6426 2,6986 2,12% Summer/Non-Summer Off-Peak (¢/kWh) 3,4643 3,5854 3,50% Non-Summer On-Peak (¢/kWh) 3,4643 3,5854 3,50% Non-Summer On-Peak (¢/kWh) 2,6049 2,6959 3,49%							

² The slight difference in the summer on-peak percentage increase is caused by rounding to achieve the target schedule revenue.

Rate Design – Schedule 6

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A.

Q. Do you have any comments on RMP's proposed rate design for Schedule 6?

Yes. As shown in UAE Exhibit RD 1.3 (TNT-3), I have examined the relationship between RMP's proposed demand charge and the demand-related costs caused by Schedule 6, as well as the relationship between RMP's proposed energy charge and the energy-related costs that are allocated to this rate schedule. I have concluded that, at RMP's proposed revenue requirement, the Company's proposed Schedule 6 demand charge lines up well with the demand-related costs caused by the customers on this rate schedule; similarly, the Company's proposed Schedule 6 energy charge, while slightly over-weighted, lines up well with Schedule 6 energy costs. Therefore, I am supportive of RMP's proposed rate design for Schedule 6 at the Company's proposed revenue requirement. As the Company's proposed revenue requirement has been reduced by the Commission, the Company's proposed demand and energy charges should be scaled back proportionately to reflect the approved Schedule 6 revenue requirement. This would retain the proper alignment of charges with cost classification in the final rate design.

Q. Does this conclude your direct testimony?

A. Yes, it does.

ATTACHMENT A

Resume

Neal Townsend Energy Strategies, LLC 215 S. State Street, Suite 200 Salt Lake City, Utah 84111

Work Experience:

Senior Consultant, Energy Strategies (2001 – Present)

Rate Analyst, Utah Division of Public Utilities (1997 – 2001)

Other

Systems Engineer, Morton Thiokol, Inc. Assistant Engineer, Schafer Engineering Graduate/Research Assistant, University of New Mexico

Education:

University of New Mexico, Masters of Business Administration, 1996

University of Texas, Austin, B.S., Mechanical Engineering, 1984

Regulatory Testimony:

State of Utah

<u>Docket #</u> 09-035-T08	Title In the Matter of Rocky Mountain Power Advice No. 09-08, seeking an Adjustment to the DSM Tariff Rider, Schedule 193	Activity Support of Stipulation
04-035-42	In the Matter of the Application of PacifiCorp For Approval of its Proposed Electric Rate Schedules and Electric Service Regulations	Derivation of Prudence Disallowance

ATTACHMENT A

03-035-14	In the Matter of the Application of PacifiCorp For Approval of an IRP Based Avoided Cost Methodology For QF Projects Larger than 1 MW	Derivation of Methodology for Establishing QF Avoided Cost Pricing
99-057-20	In the Matter of the Application of Questar Gas Company for an Increase In Rates and Charges	Revenue Requirement and Class Cost of Service Modeling, Proposed CO ₂ Plant Disallowance Mechanism
99-035-10	In the Matter of the Application of PacifiCorp For Approval of its Proposed Electric Rate Schedules and Electric Service Regulations	Interjurisdictional Cost Allocation and Class Cost of Service Modeling
98-057-12	In the Matter of the Application of Questar Gas Company for Approval of a Natural Gas Processing Agreement	Assessment of Application, Revenue Requirement Modeling
	State of Michigan	
U-15645	In the Matter of the Application of Consumers Energy Company for Authority to Increase Its Rate for the Generation and Distribution of Electricity and Other Relief	Rate Spread, Class Cost of Service

Page 1 of 1

UAE's Illustrative Schedule 8 and 9 Rate Design at RMP's Rebuttal Revenue Requirement

Test Period Forecasted Loads, RMP Rebuttal Target Annual Revenues, UAE Proposed Prices Each Energy Rate Element Increased by an Equal Percentage

Schedule 8 Blocking Large General Service - Distribution Voltage

Schedule 8 - Composite						
Rate	Forecasted Units		Current		Proposed	
Component	6/30/10	Prices	Revenues	Prices	Revenues	Change
Customer Charge	3,283	\$27.00	\$88,641	\$55.00	\$180,565	103.70%
Facilities Charge	4,527,748	\$3.69	\$16,707,390	\$3.83	\$17,341,275	3.79%
On-Peak kW: May-Sep	1,922,144	\$12.07	\$23,200,278	\$12.53	\$24,084,464	3.81%
On-Peak kW: Oct-April	2,508,971	\$8.70	\$21,828,048	\$9.03	\$22,656,008	3.79%
Voltage Discount	1,716,399	(\$0.88)	(\$1,510,431)	(\$0.91)	(\$1,561,923)	3.41%
On-Peak kWh: May-Sep	240,701,778	\$0.039189	\$9,432,862	\$0.040657	\$9,786,212	3.75%
On-Peak kWh: Oct-April	559,914,390	\$0.030677	\$17,176,494	\$0.031826	\$17,819,835	3.75%
Off-Peak kWh: May-Sep	626,280,454	\$0.026426	\$16,550,087	\$0.027415	\$17,169,479	3.74%
Off-Peak kWh: Oct-Apr	524,365,111	\$0.026426	\$13,856,872	\$0.027415	\$14,375,470	3.74%
Sub-Total	1,951,261,732		\$117,330,241		\$121,851,385	3.85%
Adjustment		0.00%	\$0	0.00%	\$0	0.00%
Total		=	\$117,330,241	=	\$121,851,385	3.85%
DSM Adjustment		4.60%	\$5,393,114	4.60%	\$5,596,858	3.78%
Total with DSM Adjustment			\$122,723,355		\$127,448,243	3.85%

Schedule 9 Blocking General Service - High Voltage

Schedule 9 - Composite						
Rate Component	Forecasted Units 6/30/10	Current Prices Revenues		Proposed Prices Revenues		Percent Change
Customer Charge	1,793	\$183.00	\$328,119	\$200.00	\$358,600	9.29%
Facilities Charge	6,760,603	\$1.65	\$11,154,995	\$1.73	\$11,695,843	4.85%
On-Peak kW: May-Sep	2,825,640	\$10.40	\$29,386,656	\$10.90	\$30,799,476	4.81%
On-Peak kW: Oct-April	3,843,734	\$7.05	\$27,098,325	\$7.39	\$28,405,194	4.82%
On-Peak kWh: May-Sep	384,941,621	\$0.034643	\$13,335,533	\$0.036323	\$13.982.234	4.85%
On-Peak kWh: Oct-April	1,013,941,762	\$0.026049	\$26,412,169	\$0.027312	\$27,692,777	4.85%
Off-Peak kWh: May-Sep	1,173,186,109	\$0.021760	\$25,528,530	\$0.022815	\$26,766,241	4.85%
Off-Peak kWh: Oct-Apr	1,105,678,360	\$0.021760	\$24,059,561	\$0.022815	\$25,226,052	4.85%
Total	3,677,747,852		\$157,303,888		\$164,926,417	4.85%
Adjustment	-,,	0.00%	\$0	0.00%	\$0	0.00%
Total		_	\$157,303,888	_	\$164,926,417	4.85%
DSM Adjustment		4.61%	\$7,236,583	4.61%	\$7,586,576	4.84%
Total with DSM Adjustment		_	\$164,540,471	_	\$172,512,993	4.85%
		=		=		

UAE's Recommended Schedule 8 and 9 Rate Design at Utah PSC's Ordered Revenue Requirement

Test Period Forecasted Loads, PSC Ordered Annual Revenues, UAE Proposed Prices Each Energy Rate Element Increased by an Equal Percentage

Schedule 8 Blocking Large General Service - Distribution Voltage

Schedule 8 - Composite						
Rate Component	Forecasted Units 6/30/10	Curro Prices	ent Revenues	Propo Prices	sed Revenues	Percent Change
Customer Charge Facilities Charge On-Peak kW: May-Sep On-Peak kW: Oct-April Voltage Discount On-Peak kWh: May-Sep On-Peak kWh: Oct-April Off-Peak kWh: May-Sep	3,283 4,527,748 1,922,144 2,508,971 1,716,399 240,701,778 559,914,390 626,280,454	\$27.00 \$3.69 \$12.07 \$8.70 (\$0.88) \$0.039189 \$0.030677 \$0.026426	\$88,641 \$16,707,390 \$23,200,278 \$21,828,048 (\$1,510,431) \$9,432,862 \$17,176,494 \$16,550,087	\$55.00 \$3.77 \$12.33 \$8.88 (\$0.90) \$0.040021 \$0.031328 \$0.026986	\$180,565 \$17,069,610 \$23,700,036 \$22,279,662 (\$1,544,759) \$9,633,126 \$17,540,998 \$16,900,804	103.70% 2.17% 2.15% 2.07% 2.27% 2.12% 2.12%
Off-Peak kWh: Oct-Apr Sub-Total Adjustment Total DSM Adjustment Total with DSM Adjustment	524,365,111 1,951,261,732	\$0.026426	\$13,856,872 \$117,330,241 \$0 \$117,330,241 \$5,393,114 \$122,723,355	\$0.026986 0.00% _ 4.60% _ =	\$14,150,517 \$119,910,559 \$0 \$119,910,559 \$5,507,580 \$125,418,139	2.12% 2.20% 0.00% 2.20% 2.12% 2.20%

Schedule 9 Blocking General Service - High Voltage

Schedule 9 - Composite						
Rate Component	Forecasted Units 6/30/10	Current Prices Revenues		Proposed Prices Revenues		Percent Change
Customer Charge	1,793	\$183.00	\$328,119	\$200.00	\$358,600	9.29%
Facilities Charge	6,760,603	\$1.65	\$11,154,995	\$1.71	\$11,560,631	3.64%
On-Peak kW: May-Sep	2,825,640	\$10.40	\$29,386,656	\$10.76	\$30,403,886	3.46%
On-Peak kW: Oct-April	3,843,734	\$7.05	\$27,098,325	\$7.30	\$28,059,258	3.55%
On-Peak kWh: May-Sep	384,941,621	\$0.034643	\$13,335,533	\$0.035854	\$13,801,697	3.50%
On-Peak kWh: Oct-April	1,013,941,762	\$0.026049	\$26,412,169	\$0.026959	\$27,334,856	3.49%
Off-Peak kWh: May-Sep	1,173,186,109	\$0.021760	\$25,528,530	\$0.022520	\$26,420,151	3.49%
Off-Peak kWh: Oct-Apr	1,105,678,360	\$0.021760	\$24,059,561	\$0.022520	\$24,899,877	3.49%
Total	3,677,747,852		\$157,303,888		\$162,838,956	3.52%
Adjustment	-,,-	0.00%	\$0	0.00%	\$0	0.00%
Total		-	\$157,303,888		\$162,838,956	3.52%
DSM Adjustment		4.61%	\$7,236,583	4.61%	\$7,490,344	3.51%
Total with DSM Adjustment		_	\$164,540,471	_	\$170,329,300	3.52%
·		-		-		

Comparison of RMP's Schedule 6 Cost-of-Service Results and RMP's Proposed Revenues by Cost Classification

(At RMP's Requested Rebuttal Revenue Increase)

Customer-Related Costs:	COS ¹	Customer-Related Revenues:	Kate Design Amounts ²
Distribution-Meter Distribution-Service Total	\$ 1,966,139 3,076,377 \$ 5,042,517	Schedule 6 - Customer Charge Schedule 6B - Customer Charge Schedule 6A - Customer Charge Total	\$ 7,202,880 15,660 1,131,345 \$ 8,349,885
Average Customers ²	15,463	Average Customers ²	15,463
\$ Charge/Month	\$ 27.18		\$ 45.00
Energy-Related Costs: Generation-Energy Transmission-Energy Total	\$ 169,761,519 6,710,701 \$ 176,472,220	Energy-Related Revenues: Schedule 6 - Demand-Related Schedule 6B - Demand-Related Schedule 6A - Demand-Related Total	\$ 172,676,414 199,885 14,803,596 \$ 187,679,895
Annual kWH ²	5,821,309,801	Annual kWH ²	5,821,309,801
\$ Charge/kWh	0.030315		0.032240
Demand-Related Costs: Generation-Demand Transmission-Demand Distribution-Substation Distribution- P & C Distribution-Transformer Total	\$ 111,893,151 28,236,703 20,537,686 56,846,879 11,601,337 \$ 229,115,756	Demand-Related Revenues: Schedule 6 - Energy-Related Schedule 6B - Energy-Related Schedule 6A - Energy-Related Total	\$ 218,886,338 303,582 8,377,979 \$ 227,567,899
Billing kW ²	17,642,580	Billing kW ²	17,642,580
\$ Charge/kW Total Customer, Energy, Demand Retail-Total Misc - Total	\$ 12.99 \$ 410,630,493 745,130 1,537,137		\$ 12.90
Total Revenue Requirement	\$ 412,912,760		\$ 423,597,679

Source: RMP COS UT Jun 2010 (MSP)_Rebuttal.xls
 Source: Rebuttal Exhibit RMP_(WRG-4R).xlsx.